Serial No. 10/019,056

Amendment Dated: 1/14/2004

Reply to Office Action Dated 10/15/2003

Amendments to the Claims:

The listing of claims will replace all prior versions, and listings, of claims

in the application:

Listing of Claims:

17. (Currently Amended) A semiconductor wafer having a roughness of

the a wafer backside surface varied in a direction of a radius, wherein varied

sections exist substantially coaxially in the direction of the radius.

18. (Currently Amended) A semiconductor wafer having a roughness of

the a wafer backside surface varied in a direction of a radius, wherein sections of

the different roughness exist at least in a peripheral part of the wafer and in a

arbitrary sections inner than radially inward of the periphery.

19. (Currently Amended) A semiconductor wafer according to claim 17,

wherein the variation of the roughness of the wafer backside surface in the

direction of the radius is continuous in the direction of the radius.

Page 2 of 9

Serial No. 10/019,056 Amendment Dated: 1/14/2004 Reply to Office Action Dated 10/15/2003

20. (Currently Amended) A semiconductor wafer according to claim 17, wherein the variation of the roughness of the <u>wafer</u> backside surface in the direction of the radius is stepwise so that the roughness varies with each <u>respective approximately designated</u> annular width in the radius direction.

21. (Currently Amended) A semiconductor wafer according to claim $1\underline{7}$, wherein a roughness wavelength of the \underline{a} coarser section in the roughness of the wafer backside surface is within the range of 5 to 100 μ m.

22. (Currently Amended) A semiconductor wafer, which is held on a wafer holding means by a face to face contact of the a whole backside surface of the wafer, having a contact surface density forming means of the backside surface of the wafer thereof, the contact surface density forming means prepared so as to vary in a direction of a radius to have a varying contact surface density distribution in the direction of the radius with respect to the contact surface density of the backside surface of the wafer to the wafer holding means.

Serial No. 10/019,056

Amendment Dated: 1/14/2004

Reply to Office Action Dated 10/15/2003

23. (Currently Amended) A semiconductor wafer according to claim $6\ \underline{22}$, wherein the contact surface density forming means is a surface roughness

distribution varied in the direction of the radius.

from process means except for polishing process.

24. (Currently Amended) A method for processing a semiconductor wafer comprising steps of polishing the <u>a</u> backside of a wafer and providing a surface roughness of the back-side of the wafer <u>backside</u> varying substantially coaxially in a direction of a radius by at least one process means <u>not including a selected</u>

25. (Currently Amended) A method for processing a semiconductor wafer according to claim 8 24, wherein the at least one process means is etching or surface grinding.

26. (Currently Amended) A method for processing a semiconductor wafer comprising steps of forming an oxide film on a backside of a wafer, removing the oxide film partially by etching, and removing the residual oxide film by polishing the a whole area of the wafer backside, whereby providing coaxially a roughness distribution approximately in a direction of a radius.

Serial No. 10/019,056 Amendment Dated: 1/14/2004

Reply to Office Action Dated 10/15/2003

27. (Currently Amended) A method for processing a semiconductor wafer according to claim 10 26, wherein the partial removal of the oxide film by etching comprises inserting tightly inserting the wafer coaxially between two disk like pads of corrosion-resistant material having the shape of a disk with a diameter smaller than a diameter of the wafer, and removing an exposed, annular edge part of the oxide film of the exposed part like an annular rim by etching.

- 28. (Currently Amended) A method for processing a semiconductor wafer according to claim 40 26, wherein the partial removal of the oxide film by etching comprises inserting tightly inserting the wafer coaxially between two annular rim like pads of corrosion-resistant material having an outer diameter equal to or larger than a diameter of the wafer and an inner diameter smaller than the diameter of the wafer and removing an exposed, inner part of the oxide film in the shape of a disk of the exposed disk like part by etching.
- 29. (Currently Amended) In an apparatus of process for fabricating semiconductor devices wherein a whole backside surface of a wafer is held by a wafer holding means by face to face contact to carry out device fabricating processes thereon, an said apparatus of process for fabricating semiconductor

Serial No. 10/019,056

Amendment Dated: 1/14/2004

Reply to Office Action Dated 10/15/2003

devices comprising a means for adjusting a contact surface density at least on a surface of the wafer holding means, the backside <u>surface</u> of the wafer or a means for applying contact pressure between both surfaces so as to have varying contact surface densities between the wafer and the surface of the wafer holding means in a direction of the wafer diameter.

- 30. (Currently Amended) An apparatus of process for fabricating semiconductor devices according to claim 13 29, wherein the adjustment of the contact surface density of the surface of the wafer holding holing means is done adjusted by giving nearly coaxially a roughness distribution in a direction of a radius of the wafer.
- 31. (Currently Amended) An apparatus of process for fabricating semiconductor devices according to claim 14 30, wherein the roughness distribution is formed given by forming a gathering of annular recesses, dotted recesses or the a combination thereof on the a center or outer part of the surface of the wafer holding means to contact the wafer surface.

Serial No. 10/019,056 Amendment Dated: 1/14/2004 Reply to Office Action Dated 10/15/2003

- 32. (Currently Amended) An apparatus of process for fabricating semiconductor devices according to claim 13 29, wherein the means for applying contact pressure between the wafer holding means and the backside of the wafer is a means for adjusting the electrostatic charge of an electrostatic chuck.
- 33. (Currently Amended) A semiconductor wafer according to claim 2 18, wherein the variation of the roughness of the wafer backside surface in the direction of the radius is continuous in the direction of the radius.
- 34. (Currently Amended) A semiconductor wafer according to claim 2 18, wherein the variation of the roughness of the wafer backside surface in the direction of the radius is stepwise so that the roughness varies with each respective approximately designated annular width in the radius direction.
- 35. (Currently Amended) A semiconductor wafer according to claim 2 18, wherein a roughness wavelength of the \underline{a} coarser section in the roughness of the wafer backside surface is within the range of 5 to 100 μ m.